they were originally marked with the letters ''CTC'' in place of ''DOT'';

(2) The cylinder has been requalified under a program authorized by the Canadian TDG regulations or requalified in accordance with the requirements in §180.205 within the prescribed requalification period provided for the corresponding DOT specification;

(3) When the regulations authorize a cylinder for a specific hazardous material with a specification marking prefix of ''DOT'', a cylinder marked ''CTC'' which otherwise bears the same markings that would be required of the specified ''DOT'' cylinder may be used; and

(4) Transport of the cylinder and the material it contains is in all other respects in conformance with the requirements of this subchapter (*e.g.* valve protection, filling requirements, operational requirements, etc.).

(n) *Metal attachments.* Metal attachments to cylinders must have rounded or chamfered corners, or be otherwise protected, so as to prevent the likelihood of causing puncture or damage to other hazardous materials packages. This requirement applies to anything temporarily or permanently attached to the cylinder, such as metal skids.

[67 FR 51643, Aug. 8, 2002, as amended at 67 FR 61289, Sept. 30, 2002; 68 FR 24660, May 8, 2003; 68 FR 32680, June 2, 2003; 68 FR 75742, 75745, Dec. 31, 2003; 70 FR 34075, June 13, 2005]

§ 173.301a Additional general requirements for shipment of specification cylinders.

(a) *General.* The requirements in this section are in addition to the requirements in §173.301 and apply to the shipment of gases in specification cylinders.

(b) *Authorized cylinders not marked with a service pressure.* For authorized cylinders not marked with a service pressure, the service pressure is designated as follows:

Specification marking	Service Pressure psig
3	1800
3E	1800
8	250

(c) *Cylinder pressure at 21 °C (70 °F).* The pressure in a cylinder at 21 °C (70 °F) may not exceed the service pressure for which the cylinder is marked or designated, except as provided in §173.302a(b). For certain liquefied gases, the pressure at 21 °C (70 °F) must be lower than the marked service pressure to avoid having a pressure at a temperature of 55 °C (131 °F) that is greater than permitted.

(d) *Cylinder pressure at 55 °C (131 °F).* The pressure in a cylinder at 55 °C (131 °F) may not exceed 5/4 times the service pressure, except:

(1) For a cylinder filled with acetylene, liquefied nitrous oxide, or carbon dioxide.

(2) For a cylinder filled in accordance with §173.302a(b), the pressure in the cylinder at 55 °C (131 °F) may not exceed 5/4 times the filling pressure.

(3) The pressure at 55 °C (131 °F) of Hazard Zone A and, after December 31, 2003, Hazard Zone B materials, may not exceed the service pressure of the cylinder. Sufficient outage must be provided so that the cylinder will not be liquid full at 55 °C (131 °F).

(e) *Grandfather clause.* A cylinder in domestic use prior to the date on which the specification for the cylinder was first made effective may be used if the cylinder has been properly tested and otherwise conforms to the requirements applicable to the gas with which it is charged.

[67 FR 51645, Aug. 8, 2002, as amended at 67 FR 61289, Sept. 30, 2002; 68 FR 24661, May 8, 2003]

§ 173.301b [Reserved]

§ 173.302 Filling of cylinders with nonliquefied (permanent) compressed gases.

(a) *General requirements.* A cylinder filled with a nonliquefied compressed gas (except gas in solution) must be offered for transportation in accordance with the requirements of this section and §§173.301, 173.301a, 173.302a, and 173.305, as applicable. Where more than one section applies to a cylinder, the most restrictive requirements must be followed.

(b) *Aluminum cylinders in oxygen service.* Each aluminum cylinder filled with oxygen must meet all of the following conditions: